



PK852(v1.0) November 30, 2016

**100% Material Declaration Data Sheet for 7-Series (Virtex) FFG1761 RoHS 6/6**

**Average Weight : 22.0100 g**

Component	Substance Description	CAS # or Description	% of component	Use in product	Component weight / substance weight ( in grams)	Component % of total
Silicon die	Si	7440-21-3	100.00	basis	0.397457	1.81%
					<b>0.015702</b>	<b>0.07%</b>
Bump	Sn	7440-31-5	98.20	basis	0.015419	
	Ag	7440-22-4	1.80	basis	0.000283	
Underfill					<b>0.048000</b>	<b>0.22%</b>
	Bisphenol F type liquid epoxy	9003-36-5	15.00	basis	0.007200	
	1,6-Bis(2,3-epoxypropoxy)naphthalene	27610-48-6	10.00	basis	0.004800	
	Bisphenol A type liquid epoxy	25068-38-6	5.00	basis	0.002400	
	Amine type hardener	trade secret	10.00	basis	0.004800	
	Silicon dioxide	60676-86-0	58.00	filler	0.027840	
	Carbon black	1333-86-4	1.00	color agent	0.000480	
Solder paste	Additives	trade secret	1.00	additives	0.000480	
	Sn	7440-31-5	96.50	metal	0.007762	0.04%
	Ag	7440-22-4	3.00	metal	0.000241	
Capacitor 1	Cu	7440-50-8	0.50	metal	0.000040	
					<b>0.000300</b>	<b>0.00%</b>
	BaTiO3 type	1304-28-5	40.00	Ceramic	0.000120	
	Titanium dioxide	13463-67-7	20.00		0.000060	
	Misc	-	6.67		0.000020	
	Ni	7440-02-0	2.42	Inner electrode	0.000007	
	Cu	7440-50-8	20.73	Out electrode	0.000062	
	Silicon dioxide	7631-86-9	1.85		0.000006	
	diboron trioxide; boric oxide	1303-86-2	0.45		0.000001	
	Ni	7440-02-0	2.12	Plating1	0.000006	
Sn	7440-31-5	5.76	Plating2	0.000017		
Capacitor2					<b>0.003800</b>	<b>0.02%</b>
	BaTiO3 type	1304-28-5	37.01	Ceramic	0.001406	
	Titanium dioxide	13463-67-7	18.51		0.000703	
	Misc	-	6.17		0.000234	
	Ni	7440-02-0	4.90	Inner Electrode	0.000186	
	Indium(III) oxide	1312-43-2	9.15		0.000348	
	Tin dioxide	18282-10-5	1.83		0.000070	
	Frits	65997-18-4	5.49		0.000209	
	Nickel	7440-02-0	1.83		0.000070	
	Cu	7440-50-8	12.05	Outer Electrode	0.000458	
	Silicon dioxide	7631-86-9	0.27		0.000010	
	diboron trioxide; boric oxide	1303-86-2	1.07		0.000041	
	Ni	7440-02-0	0.49	Plating1	0.000019	
Sn	7440-31-5	1.23	Plating2	0.000047		
Capacitor3					<b>0.000920</b>	<b>0.00%</b>
	BaTiO3 type	1304-28-5	31.67	Ceramic	0.000291	
	Titanium dioxide	13463-67-7	15.83		0.000146	
	Misc	-	5.28		0.000049	
	Ni	7440-02-0	26.67	Inner Electrode	0.000245	
	Cu	7440-50-8	15.10	Outer Electrode	0.000139	
	Silicon dioxide	7631-86-9	1.34		0.000012	
	diboron trioxide; boric oxide	1303-86-2	0.33		0.000003	
Capacitor4	Ni	7440-02-0	1.00	Plating1	0.000009	
	Sn	7440-31-5	2.78	Plating2	0.000026	
					<b>0.006880</b>	<b>0.03%</b>
	Barium oxide, obtained by calcining witherite	1304-28-5	34.54	Ceramic	0.002376	
	Titanium dioxide	13463-67-7	17.27		0.001188	
	Misc	-	5.76		0.000396	
	Nickel	7440-02-0	31.9	Inner Electrode	0.002195	
Copper	7440-50-8	8.52	Outer Electrode	0.000586		
Heat sink	Silicon dioxide	7631-86-9	0.76		0.000052	
	diboron trioxide; boric oxide	1303-86-2	0.19		0.000013	
	Nickel	7440-02-0	0.29	Plating1	0.000020	
	Tin	7440-31-5	0.77	Plating2	0.000053	
					<b>3.040000</b>	<b>13.81%</b>
	Cu	7440-50-8	98.35	Main material	2.989840	
Heat sink adhesive	Ni	7440-02-0	1.65	Main material	0.050160	
					<b>0.181000</b>	<b>0.82%</b>
Solder ball	Aluminium Oxide Al2O3	-	80.00	Main material	0.144800	
	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	20.00	Main material	0.036200	
Solder ball					<b>1.470244</b>	<b>6.68%</b>
	Sn	7440-31-5	96.50	Main material	1.418785	
	Ag	7440-22-4	3.00	Main material	0.044107	
Substrate	Cu	7440-50-8	0.50	Main material	0.007351	
					<b>16.837653</b>	<b>76.50%</b>
	Copper	7440-50-8	41.42		7.074155	
	Tin	7440-31-5	0.29		0.048829	
	Silver	7440-22-4	0.01		0.001684	
	Core (E700GR)	N/A	39.21		6.602044	
ABF (GX-13)	N/A	17.65		2.871846		
Solder Mask (SR7300G)	N/A	1.42		0.239095		

**Revision History**

Date	Version	Description of Revisions
11/30/2016	1.0	Initial Xilinx release.